### § 1915.117

- (d) Tag lines shall be provided on loads likely to swing or to need guidance.
- (e) When slings are secured to eyebolts, the slings shall be so arranged, using spreaders if necessary, that the pull is within 20 degrees of the axis of the bolt.
- (f) Slings shall be padded by means of wood blocks or other suitable material where they pass over sharpe edges or corners of loads so as to prevent cutting or kinking.
- (g) Skips shall be rigged to be handled by not less than 3 legged bridles, and all legs shall always be used. When open end skips are used, means shall be taken to prevent the contents from falling.
- (h) Loose ends of idle legs of slings in use shall be hung on the hook.
- (i) Employees shall not be permitted to ride the hook or the load.
- (j) Loads (tools, equipment or other materials) shall not be swung or suspended over the heads of employees.
- (k) Pieces of equipment or structure susceptible to falling or dislodgement shall be secured or removed as early as possible.
- (1) An individual who is familiar with the signal code in use shall be assigned to act as a signalman when the hoist operator cannot see the load being handled. Communications shall be made by means of clear and distinct visual or auditory signals except that verbal signals shall not be permitted.
- (m) Pallets, when used, shall be of such material and contruction and so maintained as to safely support and carry the loads being handled on them.
- (n) A section of hatch through which materials or equipment are being raised, lowered, moved, or otherwise shifted manually or by a crane, winch, hoist, or derrick, shall be completely opened. The beam or pontoon left in place adjacent to an opening shall be sufficiently lashed, locked or otherwise secured to prevent it from moving so that it cannot be displaced by accident.

- (o) Hatches shall not be open or closed while employees are in the square of the hatch below.
- (p) Before loads or empty lifting gear are raised, lowered, or swung, clear and sufficient advance warning shall be given to employees in the vincinity of such operations.
- (q) At no time shall an employee be permitted to place himself in a hazardous position between a swinging load and a fixed object.

 $[47\ FR\ 16986,\ Apr.\ 20,\ 1982,\ as\ amended\ at\ 67\ FR\ 44543,\ July\ 3,\ 2002]$ 

#### § 1915.117 Qualifications of operators.

Paragraphs (a) and (d) of this section shall apply to ship repairing and shipbuilding only. Paragraphs (b) and (c) of this section shall apply to ship repairing, shipbuilding and shipbreaking.

- (a) When ship's gear is used to hoist materials aboard, a competent person shall determine that the gear is properly rigged, that it is in safe condition, and that it will not be overloaded by the size and weight of the lift.
- (b) Only those employees who understand the signs, notices, and operating instructions, and are familiar with the signal code in use, shall be permitted to operate a crane, winch, or other power operated hoisting apparatus.
- (c) No employee known to have defective uncorrected eyesight or hearing, or to be suffering from heart disease, epilepsy, or similar ailments which may suddenly incapacitate him, shall be permitted to operate a crane, winch or other power operated hoisting apparatus.
- (d) No minor under eighteen (18) years of age shall be employed in occupations involving the operation of any power-driven hoisting apparatus or assisting in such operations by work such as hooking on, loading slings, rigging gear, etc.

## § 1915.118 Tables.

The provisions of this section apply to ship repairing, shipbuilding and shipbreaking.

TABLE E-1-DIMENSIONS AND SPACING OF WOOD INDEPENDENT-POLE SCAFFOLD MEMBERS

Structural members		Jp to 25 pounds ot)—Height in fe		Heavy duty (25 to 75 pounds per square foot)—Height in feet		
	≤24	>24≤40	>40≤60	≤24	>24≤40	>40≤60
Poles or uprights (in inches)	2x4	3x4 or 2x6	4×4	3x4	4 x 4	4x6
Bearers (in inches)	2x6	2x6	2x6	2x8	2x8	2 x 10
Ledgers (in inches)	2x6	2x6	2x6	2x8	2x8	2x8
ers) (in inches)	1x6	1x6	1x6	1x6	1x6	1x6
Braces (in inches)	1 x 4	1x6	1 x 6	1 x 6	1 x 6	1 x 6
feet) Pole spacing—transversely (in	71/2	71/2	71/2	7	7	7
feet)Ledger spacing—vertically (in	6½ min	7½ min	8½ min	61/2	10	10
feet)	7	7	7	41/2	41/2	41/2

TABLE E-2—SPECIFICATIONS FOR SIDE RAILS OF LADDERS

Longth (in fact)	Cross section (in inches)		
Length (in feet)	At ends	At center	
15	17/8 x 23/4 17/8 x 23/4 17/8 x 3 17/8 x 3 17/8 x 3	17/6 x 33/4 17/6 x 33/4 17/6 x 4 17/6 x 4 17/8 x 41/2	

TABLE E-3—SPECIFICATIONS FOR THE CONSTRUCTION OF HORSES

Structural members		Height in feet			
		>10≤16	16≤20		
Legs Bearers or headers Crossbraces	inches 2x4 2x6 2x4 or	inches 3x4 2x8 2x4	inches 4x6 4x6 2x6		
Longitudinal braces	1x8 2x4	2x6	2x6		

TABLE E-4—SAFE CENTER LOADS FOR SCAFFOLD PLANK OF 1,100 POUNDS FIBRE STRESS

Span in fact	Lumber dimensions in inches									
Span in feet	Α	В	Α	В	Α	В	Α	В	Α	В
	2 x 10	15/8 x 91/2	2 x 12	15/8 x 111/2	3x8	25/8 x 71/2	3 x 10	25/8 x 91/2	3 x 12	25/8 x 111/2
6	256 192 153 128 110		309 232 186 155 133 116		526 395 316 263 225 197		667 500 400 333 286 250		807 605 484 404 346 303	

<sup>(</sup>A)—Rough lumber. (B)—Dressed lumber.

TABLE G-1—NUMBER AND SPACING OF U-BOLT

TABLE G-1—NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS

Improved play steel rape	Number	Min- imum		
Improved plow steel, rope diameter, inches	Drop forged	Other material	spacing, inches	
(1)				
1/2	3	4	3	
5/8	3	4	33/4	

WIRE ROPE CLIPS—Continued

Improved play steel rape	Number	Min- imum	
Improved plow steel, rope diameter, inches	Drop forged	Other material	spacing, inches
3/4	4	5	41/2
7/8	4	5	51/4
4	1	6	ء ا

### § 1915.120

TABLE G-1—NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS—Continued

Improved plant steel year	Number	Min- imum		
Improved plow steel, rope diameter, inches	Drop forged	Other material	spacing, inches	
1½	5 5 6 6	6 7 7 8	63/4 71/2 81/4	

<sup>&</sup>lt;sup>1</sup>Three clips shall be used on wire size less than ½-inch

TABLE G-2—MAXIMUM ALLOWABLE WEAR AT ANY POINT OF LINK

imi lov Chain size in inches we fre	
3/6	Max- um al- wable ear in action of ches
1/2 5/6 3/4 7/8 1 11/9 11/4 13/6	3/64
56 3/4 7/8 1 1/9 11/4 13/9	5/64
3/4	7/64
7/6	9/64
1	5/32
1½	11/64
1½	3∕1€
13/8	7/32
	1/4
1½	9/32
	5/16
13/4	11/32

[47 FR 16986, Apr. 20, 1982, as amended at 61 FR 26351, May 24, 1996; 67 FR 44543, July 3, 2002: 76 FR 33610. June 8, 2011]

# § 1915.120 Powered industrial truck operator training.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.178(1) of this chapter.

[63 FR 66274, Dec. 1, 1998]

# Subpart H—Tools and Related Equipment

### § 1915.131 General precautions.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) Hand lines, slings, tackles of adequate strength, or carriers such as tool bags with shoulder straps shall be provided and used to handle tools, materials, and equipment so that employees will have their hands free when using ship's ladders and access ladders. The use of hose or electric cords for this purpose is prohibited.

- (b) When air tools of the reciprocating type are not in use, the dies and tools shall be removed.
- (c) All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts. The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.
- (d) The moving parts of machinery on a dry dock shall be guarded.
- (e) Before use, pneumatic tools shall be secured to the extension hose or whip by some positive means to prevent the tool from becoming accidentally disconnected from the whip.
- (f) The moving parts of drive mechanisms, such as gearing and belting on large portable tools, shall be adequately guarded.
- (g) Headers, manifolds and widely spaced hose connections on compressed air lines shall bear the word "air" in letters at least 1-inch high, which shall be painted either on the manifolds or separate hose connections, or on signs permanently attached to the manifolds or connections. Grouped air connections may be marked in one location.
- (h) Before use, compressed air hose shall be examined. Visibly damaged and unsafe hose shall not be used.

 $[47\ FR\ 16986,\ Apr.\ 20,\ 1982,\ as\ amended\ at\ 67\ FR\ 44543,\ July\ 3,\ 2002]$ 

## § 1915.132 Portable electric tools.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking except that paragraph (e) of this section applies to ship repairing only.

(a) The frames of portable electric tools and appliances, except double insulated tools approved by Underwriters' Laboratories, shall be grounded either through a third wire in the cable containing the circuit conductors or through a separate wire which is grounded at the source of the current.